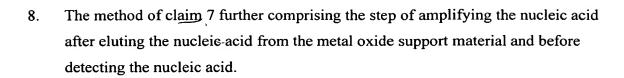
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Claims

What is claimed is:

- 1. A method for separating nucleic acid from a test sample comprising:
 - a) contacting a test sample with a metal oxide support material with a binding buffer to form nucleic acid/netal oxide support material complexes, wherein the binding buffer comprises a chaotropic agent and a detergent;
 - b) separating the complexes from the test sample; and
 - c) eluting the nucleic acid from the metal oxide support material.
- 2. The method of claim 1 wherein the binding buffer further comprises a reducing agent.
- 3. The method of claim 1 wherein the binding buffer further comprises an organic solvent and the flashpoint of the binding buffer is greater than 130 degrees Fahrenheit.
- 4. The method of claim 2 wherein the binding buffer further comprises an organic solvent and the flashpoint of the binding buffer is greater than 130 degrees Fahrenheit.
- 5. The method of claim 1 further comprising a wash step after separating the complexes from the test sample and before eluting the nucleic acid from the metal oxide support material.
- 6. The method of claim 1 wherein eluting the nucleic acid from the metal oxide support material comprises contacting the complexes with a reagent selected from water or a phosphate containing buffer.
- 7. The method of claim 6 further comprising the step of detecting the nucleic acid after the eluting the nucleic acid from the metal oxide support material.



- 9. The method of claim 7 wherein the nucleic acid comprises nucleic acid from distinct sources.
- 10. The method of claim 9 wherein the nucleic acid is RNA and DNA.
- 11. A kit for separating nucleic acid from a test sample comprising:
 - a) metal oxide particles;
 - b) a binding buffer comprising
 - (i) a chaotropic reagent, and
 - (ii) a detergent; and
 - c) an elution buffer comprising water,

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